

NSRSS Presentations Report

Date	Sequence	Lecturer	Title
Monday, June 06, 2011	1	Krenek, Sam	NASA's Mission and Roadmap
	2	Borak, Thomas	What is Radiation
	3	Borak, Thomas	Radiation Interactions With Matter
	4	Borak, Thomas	Introduction to Radiation Dosimetry
	5	Hall, Eric	Radiobiology 1
	6	Borak, Thomas	Principles of Radiation Protection
Tuesday, June 07, 2011	1	Hall, Eric	Radiobiology 2
	2	Nelson, Greg	Physics Tool Kit
	3	O'Neill, Peter	Radiation Chemistry and DNA Damage
	4	Held, Kathy	Dose Responses, LET and RBE
	5	Borak/Heilbronn	Radiation Detection Methods
Wednesday, June 08, 2011	1	Heilbronn, Lawrence	Heavy Ions and Shielding Physics, including Neutrons
	2	Heilbronn, Lawrence	Physics Homework and Problems
	3	Bedford, Joel	Radiosensitivity and Cell Cycle
	4	O'Neill, Peter	Oxidative stress
	5	Bedford, Joel	Chromosome Rearrangements
Thursday, June 09, 2011	1	Wilson, Paul	DNA Repair
	2	Azzam, Ed	Non-Targeted Effects-Waiting for Final Version
	3	Nelson, Greg	Microgravity Effects
	4	Goodhead, Dudley	Track Structure
	5	Blakely, Bill	Biomarkers and Biodosimetry
	6	Schimmerling, Walter	Space Radiation Protection

NSRSS Presentations Report

Date	Sequence	Lecturer	Title
Friday, June 10, 2011	1	Baulch, Janet	Epigenetics
	2	Guida, Peter	Flow Cytometry
	3	Baulch/Guida	Biology Experiment Overview
	4	Boothman, David	Radiation-Induced Cell Signaling
	5	Baulch, Janet	Biology Review
	6	Lowenstein, E	Accelerators
	7	Rusek, Adam	NSRL Dosimetry
Monday, June 13, 2011	1	Baulch/Guida	Lab Day
	2	Kronenberg, Amy	Mutagenesis
Tuesday, June 14, 2011	1	Oneill, Patrick	Space Radiation Environment - 1
	2	Oneill, Patrick	Space Radiation Environment - 2
	3	Kronenberg, Amy	Apoptosis
	4	Zeitlin, Cary	Accelerator Physics and Space Simulation
	5	Kennedy, Ann	Acute Effects
	6	Randers-Pehrson	High/Low LET Microbeams
Wednesday, June 15, 2011	1	Weil, Michael	Genetics of Animal Studies
	2	Weil, Michael	Leukemia
	3	Guida, Peter	Flow Cytometry Lab
	4	Pluth, Janice	DNA Damage Lab
Thursday, June 16, 2011	1	Shay, Jerry	3D Cell Culture Models
	2	Shay, Jerry	Biological Countermeasures for Radiation Protection
	3	Williams, J	Model Systems Late Effects, Cancer
	4	Demaria, Sandra	Haematopoietic and Immune Response

NSRSS Presentations Report

Date	Sequence	Lecturer	Title
Thursday, June 16, 2011	5	Rusek/Guida	Experimental Plan for Tomorrow
Friday, June 17, 2011	1	Rusek/Guida	Lab Day - NSRL with Beam Time
	2	Kirsch, David	Transgenic Models and New Imaging Approaches
	3	Rusek, Adam	Lab Day - NSRL (pt 2)
Monday, June 20, 2011	1	Cucinotta, Frank	NSRL Simulation (GERM Code)
	2	Nelson, Greg	Tool Kit Practical
	3	Nelson, Greg	Beam Time Proposals
	4	Joiner, Michael	Effects on Embryo, Fetus, Transgenerational
	5	Nelson, Greg	Beam Time Proposals
	6	Joiner, Michael	Dose Rate Effects
Tuesday, June 21, 2011	1	Story, Michael	Omics Technologies
	2	Nelson, Greg	Space Flight Measurements
	3	Nelson, Greg	Beam Time Proposals
	4	Obanion, Kerry	Cardiovascular Effects
	5	Fike, John	Neurogenesis
	6	Fike, John	Radiation Effects on Neurons and Stem Cells
Wednesday, June 22, 2011	1	Plante	Track Structure Simulations
	2	Barcellos-Hoff, Mary Helen	Systems Biology Approaches to Radiation Effects
	3	Obanion, Kerry	CNS Effects
	4	Nelson/Cucinotta	Review Time
Thursday, June 23, 2011	1	Cucinotta, Frank	Chemical Kinetics in Systems Biology
	2	Cucinotta, Frank	Radiation Quality and Risk Models
	3	Blakely, Ellie	Cataracts

NSRSS Presentations Report

Date	Sequence	Lecturer	Title
Thursday, June 23, 2011	4	Blakely, Ellie	Heavy Partical Therapy
Thursday, May 24, 2012	1	N/A	Training Audit, IDs, Cash Checks
	2	N/A	Radiological Worker Training
Friday, May 25, 2012	1	N/A	NSRL Radiobiology Users Training
	1	L&D Goodhead, G. Nelson	Intro Lecture
	2	N/A	BNL Tour and group photo
	3	N/A	NSRL Iris Scans
	4	Goodhead, Linda	Elementary reviews of physics and biology
Monday, May 28, 2012	1	L&D Goodhead, Guida	Welcome and Program Goals
	2	Cucinotta, Frank	NASA's Mission and Roadmap
	3	Borak, Thomas	What is Radiation
	4	Borak, Thomas	Radiation Interactions with Matter
	5	Borak, Thomas	Introduction to Radiation Dosimetry
	6	Hall - by Goodheads	Radiobiology 1
	7	Borak, Thomas	Principles of Radiation
Tuesday, May 29, 2012	1	Various	Medical Dept Daily Briefing
	2	Hall, Eric	Radiobiology 2
	3	Nelson, Greg	Physics Tool Kit
	4	Various	Physics 5: Chalk Talk/Problems
	5	Held, Kathy	Radiation Chemistry and DNA Damage
	6	Held, Kathy	Dose Responses, LET and RBE
	7	Borak/Heilbronn	Radiation Detection Methods
Wednesday, May 30, 2012	1	Various	Medical Daily Briefing

NSRSS Presentations Report

Date	Sequence	Lecturer	Title
Wednesday, May 30, 2012	2	Heilbronn, Lawrence	Heavy Ions and Shielding Physics, including Neutrons
	3	Heilbronn/Goodhead	Physics Homework Problems
	4	Kronenberg, Amy	Apoptosis
	5	Wilson, Paul	DNA Repair 1
	6	Wilson, Paul	DNA Repair 2
	Thursday, May 31, 2012	1	Various
2		Kronenberg, Amy	Mutagenesis
3		Bedford, Joel	Chromosome Rearrangements
4		Joiner, Michael	Radiosensitivity and Cell Cycle
5		Joiner, Michael	Radiation Induced Instability
6		Bedford, Joel	Dose Rate Effects
7		Goodhead, Dudley	Track Structure
Friday, June 01, 2012	1	Various	Medical Daily Briefing
	2	Baulch/Guida	Guida - Flow Cytometry Baulch and Guida - Biology Experiment Overv
	3	Schimmerling, Walter	Space Radiation Protection
	4	Baulch, Janet	Epigenetics
	5	Lowenstein, E	Accelerators
	6	Rusek, Adam	NSRL Dosimetry
Monday, June 04, 2012	1	Various	Medical Daily Briefing
	2	O'Neill, Patrick	Space Radiation Environment - 1
	3	O'Neill, Patrick	Space Radiation Environment - 2
	4	Boothman, David	Radiation-Induced Cell Signaling
	5	Zeitlin, Cary	Accelerator Physics and Space Simulation

NSRSS Presentations Report

Date	Sequence	Lecturer	Title
Monday, June 04, 2012	6	Nelson, Greg	Space Flight Measurements
	7	Baulch, Janet	Effects on Embryo, Fetus, Transgenerational
Tuesday, June 05, 2012	1	Baulch/Guida	Lab Day - NSRL
	2	Baulch/Guida	Beam Time
	3	Baulch/Guida	Lab
	4	Baulch/Guida	Lab
	5	Baulch/Guida	Lab
	6	Azzam, Ed	Non-Targeted Effects
Wednesday, June 06, 2012	1	Various	Medical Daily Briefing
	2	Weil, Michael	Animal Studies
	3	Weil, Michael	Genetics of Animals
	4	Nelson, Greg	Haematopoietic & Immune Response
	5	Kennedy, Ann	Acute Effects
	6	Weil, Michael	Leukemia
	7	Nelson, Greg	Beam Time Proposals, Homework, Questions
Thursday, June 07, 2012	1	Various	Medical Daily Briefing
	2	Shay, Jerry	3D Cell Culture Models
	3	Shay, Jerry	Biological Countermeasures For Radiation Protection
	4	Nelson, Greg	Microgravity Effects
	5	Guida	Labs: Flow Cytometry-Guida DNA Damage-Kim
	6	Rusek/Guida	Experimental Plan for Tomorrow
Friday, June 08, 2012	1	Rusek/Nelson	NSRL-Rusek Toolkit Practical and Beam Time Proposal-Nelson
	2	Barcellos-Hoff, Mary Helen	Systems Biology Approaches to Radiation Effects

NSRSS Presentations Report

Date	Sequence	Lecturer	Title
Friday, June 08, 2012	3	Rusek/Nelson	NSRL-Rusek Toolkit Practical and Beam Time Proposal-Nelson
Monday, June 11, 2012	1	Various	Medical Daily Briefing
	2	Cucinotta, Frank	NSRL Simulation (GERM Code)
	3	Plante, Ianik	Track Structure Simulations
	4	Kirsch, David	Transgenic Models and New Imaging Approaches
	5	Kirsch, David	Cancer Stem Cells
	6	Goodhead, Dudley	Track Structure 2
	7	Randers-Pehrson	High and Low LET Microbeams
Tuesday, June 12, 2012	1	Various	Medical Daily Briefing
	2	Story, Michael	Omics Technologies
	3	Various	Beam Time Proposals
	4	O'Banion, Kerry	Cardiovascular Effects
	5	O'Banion, Kerry	CNS Effects
	6	Fike, John	Neurogenesis
	7	Fike, John	Radiation Effects on Neurons and Stem Cells
Wednesday, June 13, 2012	1	Various	Medical Daily Briefing
	2	Blakely, Bill	Biomarkers and Biodosimetry
	3	Various	Beam Time Proposals
	4	Faculty and Cucinotta	Review Time
	5	Various	Lab Time
Thursday, June 14, 2012	1	Various	Medical Daily Briefing
	2	Cucinotta, Frank	Chemical Kinetics in Systems Biology
	3	Cucinotta, Frank	Radiation Quality & Risk Models

NSRSS Presentations Report

Date	Sequence	Lecturer	Title
Thursday, June 14, 2012	4	Blakely, Ellie	Cataracts
	5	Blakely, Ellie	Heavy Particle Therapy
Friday, June 15, 2012	1	Various	Medical Daily Briefing
	2	Various	Student Presentations and Review of Beam Time Proposals
Friday, May 31, 2013	1	Goodhead and Nelson	Elementary Reviews of Physics and Biology
Monday, June 03, 2013	1	Goodhead, Nelson, Guida	Welcome and Program Goals
	2	Cucinotta	NASA's Mission and Roadmap
	3	Borak	What is Radiation
	4	Borak	Radiation Interactions with Matter
	5	Borak	Introduction to Radiation Dosimetry
	6	Hall	Radiobiology I
	7	Borak	Principles of Radiation Protection
Tuesday, June 04, 2013	1	Various	Daily Briefing
	2	Hall	Radiobiology 2
	3	Nelson	PhysicsTool Kit
	4	Various	Physics Chalk Talk/problems
	5	Held	Radiation Chemistry and DNA Damage
	6	Held	Dose responses, LETand RBE
	7	Borak/Heilbronn	Radiation detection methods
Wednesday, June 05, 2013	1	Various	Daily Briefing
	2	Heilbronn	Heavy Ions and Shielding Physics, including Neutrons
	3	Heilbronn/Goodhead	Physics Homework/ problems
	4	Kronenberg	Programmed Cell Death

NSRSS Presentations Report

Date	Sequence	Lecturer	Title
Wednesday, June 05, 2013	5	Iliakis	DNA Repair
Thursday, June 06, 2013	1	Various	Daily Briefing
	2	Morgan	Chromosome Rearrangements
	3	Kronenberg	Mutagenesis
	4	Joiner	Radiosensitivity and Cell Cycle
	5	Joiner	Effects on Embryo, Fetus, Transgenerational
	6	Joiner	Dose Rate Effects
	7	Morgan	Systems Biology of Radiation
Friday, June 07, 2013	1	Various	Daily Briefing
	2	Kronenberg/Guida	Biology Experiment Overview for 6/4 (Kronenberg and Guida), Biolog
	3	Kronenberg	Radiation-induced Instability
	4	D.Goodhead	Track Structure 1
	5	Lowenstein	Accelerators
	6	Rusek	NSRL Dosimetry
Monday, June 10, 2013	1	Various	Daily Briefing
	2	Zeitlin	Space Radiation Environment
	3	Zeitlin	Accelerator Physics and Space Simulation
	4	Boothman	Radiation-Induced Cell Signaling
	5	Sivertz	Low-LET Reference Radiation
	6	Kennedy	Acute Effects
	7	Turker	Epigenetics
Tuesday, June 11, 2013	1	Kronenberg/Guida	Lab Day
	2	Kronenberg/Guida	Lab/Beam Time

NSRSS Presentations Report

Date	Sequence	Lecturer	Title
Tuesday, June 11, 2013	3	Azzam	Non-targeted Effects
Wednesday, June 12, 2013	1	Various	Daily Briefing
	2	Weil	Animal Studies
	3	Weil	Genetics of Animal Studie
	4	Schimmerling	Space Radiation Protection
	5	Weil	Leukemia
	6	Various	Beam Time Proposals, Homework, Questions
	7	Randers-Pehrson	High/Low LET Microbeams
Thursday, June 13, 2013	1	Various	Daily Briefing
	2	Shay	3D Cell Culture Models
	3	Shay	Biol Countermeasures For Radiation Protection
	4	Various	Biol Countermeasures For Radiation Protection
	5	Guida/Kim	Labs: Flow Cytometry and DNA Damage
	6	Rusek/Guida	Experimental Plan for Tomorrow
Friday, June 14, 2013	1	Rusek	Lab Day: First half at NSRL for Beam Time. Second half at 490 for Bea
	2	D.Goodhead	Track Structure 2
	3	Rusek	Lab Day: Second half at NSRL for Beam Time. First half at 490 for Bea
Monday, June 17, 2013	1	Various	Daily Briefing
	2	Cucinotta	NSRL Simul(GERMcode)
	3	Nelson	Tool Kit Practical
	4	Plante	RITRACKS Track structure Simulations
	5	Nelson	Beam Time Proposals
	6	Nelson	Haematopoietic & Immune Response

NSRSS Presentations Report

Date	Sequence	Lecturer	Title
Monday, June 17, 2013	7	Nelson	Beam Time Proposals
Tuesday, June 18, 2013	1	Various	Daily Briefing
	2	Story	Omics Technologies
	3	Nelson	Space Flight Measurements
	4	Nelson	Microgravity Effects
	5	O'Banion	Cardiovascular Effects
	6	Fike	Neurogenesis
	7	Fike	Radiation Effects on Neurons & Stem Cells
Wednesday, June 19, 2013	1	Various	Daily Briefing
	2	O'Banion	CNS Effects
	3	Kirsch	Transgenic Models and New Imaging approaches
	4	Kirsch	Cancer Stem Cells
	5	Nelson & Cucinotta	Review Time
	6	N/A	LAB TIME
	7	N/A	Work On Presentations
Thursday, June 20, 2013	1	Various	Daily Briefing
	2	Cucinotta	Chemical Kinetics in Systems Biology
	3	Cucinotta	Radiation Quality & Risk Models
	4	Blakely	Cataracts
	5	Blakely	Heavy Particle Therapy
	6	N/A	Prepare Final Presentations. Beam Time Proposals Due
Friday, June 21, 2013	1	Various	Daily Briefing
	2	Various	Review Of Beam Time Proposals (5 min presentation +feedback)

NSRSS Presentations Report

Date	Sequence	Lecturer	Title
Friday, June 21, 2013	3	Various	Student Team Ppt Presentations ~20 minutes each
	4	Various	Closing Ceremony - Large Conference Room
Friday, May 30, 2014	1	Norbury	Elementary Radiation Physics
	2	Nelson	Elementary Radiation Biology
Monday, June 02, 2014	1	Norbury, Guida, Ward	Welcome & Program Goals
	2	Simonsen	NASA's Mission & Roadmap
	3	Borak	What is Radiation
	4	Borak	Radiation Interactions with Matter
	5	Borak	Introduction to Radiation Dosimetry
	6	Hall	Radiobiology I
	7	Borak	Principles of Radiation Protection
Tuesday, June 03, 2014	1	Various	Daily Briefing
	2	Hall	Radiobiology 2
	2	Borak/Heilbronn	Radiation detection methods
	2	Various	Physics Chalk Talk/problems
	2	Nelson	Physics Tool Kit
	2	Held	Radiation Chemistry and DNA Damage
	2	Held	Dose responses, LET & RBE
Wednesday, June 04, 2014	1	Various	Daily Briefing
	2	Heilbronn	Heavy Ions and Shielding Physics, including Neutrons
	3	Heilbronn	Physics Homework/ problems
	4	Kronenberg	Programmed Cell Death
	5	Wallace	DNA Repair

NSRSS Presentations Report

Date	Sequence	Lecturer	Title
Thursday, June 05, 2014	1	Various	Daily Briefing
	2	Morgan	Chromosome Rearrangements
	3	Kronenberg	Mutagenesis
	4	Joiner	Radiosensitivity and Cell Cycle
	5	Joiner	Effects on Embryo, Fetus, Transgenerational
	6	Joiner	Dose Rate Effects
	7	Morgan	Systems Biology of Radiation
Friday, June 06, 2014	1	Various	Daily Briefing
	2	Zeitlin	Space Radiation Environment
	3	Zeitlin	Accelerator Physics and Space Simulation
	4	Kronenberg	Radiation-induced Instability
	5	D. Goodhead	Track Structure 1
	6	D. Goodhead	Track Structure 2
	7	Rusek	NSRL Dosimetry
Monday, June 09, 2014	1	Various	Daily Briefing
	2	Kronenberg/Guida	Biology Experiment Overview for 6/10 (Kronenberg and Guida), Biolo
	3	Lowenstein	Accelerators
	4	Sivertz	Low-LET Reference Radiation
	5	Kennedy	Acute Effects
	6	Turker	Epigenetics
Tuesday, June 10, 2014	1	Kronenberg/Guida	Lab Day
	2	Azzam	Non-targeted Effects
Wednesday, June 11, 2014	1	Various	Daily Briefing

NSRSS Presentations Report

Date	Sequence	Lecturer	Title
Wednesday, June 11, 2014	2	Weil	Animal Studies
	3	Weil	Genetics of Animal Studies
	4	Norbury	Space Radiation
	5	Weil	Leukemia
	6	Various	Beam Time Proposals Homework, Questions
	7	Randers-Pehrson	High/Low LET Microbeams
	Thursday, June 12, 2014	1	Various
2		Shay	3D Cell Culture Models
3		Shay	Biol Countermeasures For Radiation Protection
4		Chuck Carlson	Visit to Tandem Van de Graaff
5		Guida/Kim	LAB In 2 Groups: 1 Flow Cytometry (Guida), 2 DNA Damage (Kim)
6		Rusek/Guida	Experimental Plan for Tomorrow
Friday, June 13, 2014	1	Rusek	LAB Day - NSRL: 1/2 at NSRL and 1/2 at 490
	2	Norbury	Space Radiation Transport
	3	Rusek	LAB Day - NSRL: 1/2 at NSRL and 1/2 at 490
Monday, June 16, 2014	1	Various	Daily Briefing
	2	Nelson	Tool Kit Practical
	3	Myung Hee Kim	NSRL Simul(GERMcode)
	4	Plante	RITRACKS Track structure Simulations
	5	Nelson	Beam Time Proposals
	6	Nelson	Haematopoietic & Immune Response
	7	Nelson	Beam Time Proposals
Tuesday, June 17, 2014	1	Various	Daily Briefing

NSRSS Presentations Report

Date	Sequence	Lecturer	Title
Tuesday, June 17, 2014	2	Story	Omics Technologies
	3	Kirsch	Transgenic Models and New Imaging Approaches
	4	Kirsch	Cancer Stem Cells
	5	O'Banion	Cardiovascular Effects
	6	Fike	Neurogenesis
	7	Fike	Radiation Effects on Neurons & Stem Cells
	Wednesday, June 18, 2014	1	Various
2		O'Banion	CNS Effects
2		Various	Work On Presentations
2		Various	Lab Time
2		Nelson	Space Flight Measurements
2		Nelson	Microgravity Effects
2		Nelson	Review Time
Thursday, June 19, 2014	1	Various	Daily Briefing
	2	Schimmerling	Space Radiation Protection & Risk
	3	Boothman	Radiation-Induced Cell Signaling
	4	Ellie Blakely	Cataracts
	5	Ellie Blakely	Heavy Particle Therapy
	6	Various	Prepare Final Presentations. Beam Time Proposals Due
Friday, June 20, 2014	1	Various	Daily Briefing
	2	Various	Review Of Beam Time Proposals (5 min presentation +feedback)
	3	Various	Review Of Beam Time Proposals
	4	Various	Review Of Beam Time Proposals

NSRSS Presentations Report

Date	Sequence	Lecturer	Title
Friday, June 20, 2014	5	Various	Student Team Presentations (~20 min each)
	6	Various	Closing Ceremony - Large Conf Room
Wednesday, June 03, 2015	1	Norbury - Nelson	Arrival at BNL
Thursday, June 04, 2015	2	Various	Summer School Opening
	3	Various	Training, Registration, Etc.
	4	N/A	Lunch
	5	Various	Radiological Worker Training and Test
	1	Various	Training and Registration Continues
Friday, June 05, 2015	2	N/A	Lunch
	3	Various	BNL Tour
	4	Various	Iris Scans and TLDs
	5	Norbury, John	Elementary Radiation Physics
	6	Nelson, Greg	Elementary Radiation Biology
Monday, June 08, 2015	1	Simonsen, Lisa	NASA's Mission and Roadmap
	2	Borak, Tom	Lecture 1 What is Radiation
	3	Borak, Tom	Lecture 2 Radiation Interactions with Matter
	4	Hall, Eric	Radiobiology 1
	5	Hall, Eric	Radiobiology 2
	6	Borak, Tom	Introduction to Radiation Dosimetry
Tuesday, June 09, 2015	1	Borak, Tom	Principles of Radiation Protection
	2	Norbury, John	Intro to Space Radiation
	3	Gardner (NSRSS)	Accelerators
	4	Lowenstein, Derek	Accelerators

NSRSS Presentations Report

Date	Sequence	Lecturer	Title
Tuesday, June 09, 2015	5	Nelson, Greg	Physics Tool Kit
	6	Various	Physics Chalk Talk/problems
	7	Borak, Tom	Radiation Detection Methods
Wednesday, June 10, 2015	1	Heilbronn, Lawrence	Heavy Ions and Shielding Physics, including Neutrons
	2	Heilbronn, Lawrence	Physics Homework/Problems
	3	Wallace (NSRSS)	DNA Repair 2015
	4	Kronenberg, Amy	Programmed Cell Death
Thursday, June 11, 2015	1	Morgan, William	Chromosome Rearrangements
	2	Kronenberg, Amy	Mutagenesis
	3	Weil, Michael	Animal Studies
	4	Weil, Michael	Genetics of Animal Studies
	5	Weil, Michael	Leukemia
	6	Morgan, William	Systems Biology of Radiation
	7	Rusek - Guida	Experimental Plan for Tomorrow
Friday, June 12, 2015	1	Rusek, Adam	First ½ at NSRL For LAB Day with Beam Time
	2	Blattnig, Steve	Cancer Risk Model
	3	Rusek, Adam	Second ½ at NSRL For LAB Day with Beam Time
Monday, June 15, 2015	1	Kronenberg - Guida	Biology Experiment Overview for Tomorrow
	2	Kronenberg, Amy	Biology Review
	3	Held, Kathryn	Radiation Chemistry & DNA Damage
	4	Held, Kathryn	Dose responses, LET & RBE
	5	Williams, Jacky	Acute Effects
	6	Turker, Mitchell	Epigenetics

NSRSS Presentations Report

Date	Sequence	Lecturer	Title
Tuesday, June 16, 2015	1	Various	Lab and NSRL Beam Time Until 3 PM
	2	Kim - Plante	GERM, RITRACKS
Wednesday, June 17, 2015	1	Joiner, Mike	Radiosensitivity and Cell Cycle
	2	Joiner, Mike	Effects on Embryo, Fetus, Transgenerational
	3	Semones, Ed	Operations, Risk, Monitoring Crew Exposure, ISS Dosimetry
	4	Various	Beam Time Proposals Homework, Questions
	5	Lowenstein, Derek	8:00 to 9:00 pm - Key Note Lecture
Thursday, June 18, 2015	1	Carlson - Rusek	Visit to Tandem Van de Graaff & EBIS
	2	Goodhead, Dudley	Track Structure 1
	3	Guida - Kim	LAB In 2 Groups: 1. Guida - Flow Cytometry 2. Kim - DNA Damage, etc.
Friday, June 19, 2015	1	Norbury, John	Nuclear Physics
	2	Slaba, Tony	Space Radiation Transport & GCR Simulation
	3	Slaba, Tony	HZETRN, OLTARIS & Monte Carlo Codes
	4	Goodhead, Dudley	Track Structure 2
	5	Azzam, Edouard	Non-Targeted Effects
Monday, June 22, 2015	1	Nelson, Greg	Tool Kit Practical
	2	Sivertz, Mike	Low-LET Reference Radiation
	3	Nelson, Greg	Beam Time Proposals
	4	Kirsch, David	Transgenic Models and New Imaging Approaches
	5	Kirsch, David	Cancer Stem Cells
	6	Nelson, Greg	Beam Time Proposals
Tuesday, June 23, 2015	1	Shay, Jerry	3D Cell Culture Models
	2	Shay, Jerry	Biological Countermeasures For Radiation Protection

NSRSS Presentations Report

Date	Sequence	Lecturer	Title
Tuesday, June 23, 2015	3	Nelson, Greg	Haematopoietic & Immune Response
	4	Randers-Pehrson, Gerhard	Microbeams
	5	Nelson, Greg	Microgravaty Effects
	6	Nelson, Greg	Space Flight Measurements
Wednesday, June 24, 2015	1	Zeitlin, Cary	Space Radiation Environment
	2	Zeitlin, Cary	Accelerator Physics and Space Simulation
	3	Kronenberg, Amy	Radiation-Induced Instability
	4	Kronenberg, Amy	Radiation-Induced Instability
	5	Story, Michael	Omics Technologies
	6	Story, Michael	Omics Technologies
	7	Nelson, Greg	Review Time
	8	Nelson, Greg	Review Time
Thursday, June 25, 2015	1	Boothman, David	Radiation-Induced DNA Damage & Repair Triggers Cell Signaling
	2	O'Banion, Kerry	CNS Effects
	3	O'Banion, Kerry	Cardiovascular Effects
	4	Blakely, Eleanor	Cataracts
	5	Blakely, Eleanor	Heavy Particle Therapy
	6	Various	Prepare Final Presentations Beam Time Proposals Due
Friday, June 26, 2015	1	Various	Review of Beam Time Proposals (5 min presentation + feedback)
	2	Various	Review Of Beam Time Proposals (Continued)
	3	Various	Review Of Beam Time Proposals (Continued)
	4	Various	Student Team Presentations (~20 min each)
	5	Norbury, John	Closing Ceremony Large Conf Room Catered

NSRSS Presentations Report

Date	Sequence	Lecturer	Title
Friday, June 03, 2016	1	Norbury	Elementary Radiation Physics
	2	Nelson	Elementary Radiation Biology
Monday, June 06, 2016	1	Norbury, Guida	Welcome and Program Goals
	2	Simonsen	NASA's Mission and Roadmap
	3	Borak	Radiation Interactions with Matter
	4	Borak	What is Radiation
	5	Norbury	Intro to Space Radiation
	6	Borak	Intro to Radiation Dosimetry
	7	Borak	Principles of Radiation Protection
Tuesday, June 07, 2016	1	Nelson	Physics Tool Kit
	2	Borak/Heilbronn	Radiation detection methods
	3	Lowenstein	Accelerators
	4	Hall	Radiobiology 1
	5	Hall	Radiobiology 2
	6	Borak/Heilbronn	Physics Chalk Talk/problems
Wednesday, June 08, 2016	1	Heilbronn	Heavy Ions and Shielding Physics, including Neutrons
	2	Heilbronn	Physics Homework/ problems
	3	Held	Radiation Chemistry & DNA Damage
	4	Held	Dose responses, LET & RBE
	5	Kronenberg	Programmed Cell Death
Thursday, June 09, 2016	1	Wallace	DNA Repair
	2	Bailey	Radiation Cytogenetics
	3	Kronenberg	Mutagenesis

NSRSS Presentations Report

Date	Sequence	Lecturer	Title	
Thursday, June 09, 2016	4	Story	Omics Technologies	
	5	Rusek/Guida	Experimental Plan for Tomorrow	
Friday, June 10, 2016	0	Rusek	1/2 day Beam Time & 1/2 day at 490	
	1	La Tessa	Measuring Ion Interactions with Matter	
Monday, June 13, 2016	0	Kronenberg/Guida	Bio Experiment Overview and Review	
	1	Sivertz	Low-LET Reference Radiation	
	2	Weil	Animal Studies	
	3	Weil	Genetics of Animal Studies	
Tuesday, June 14, 2016	4	Weil	Leukemia	
	0	Guida	Beam Time and Lab all day	
	Wednesday, June 15, 2016	1	Joiner	Radiosensitivity and Cell Cycle
		2	Joiner	Effects on Embryo, Fetus, Transgenerational
3		Joiner	Dose Rate Effects	
4		Semones	Operations, Risk, Monitoring Crew Exposure, ISS Dosimetry	
Thursday, June 16, 2016	1	Fike	Neurogenesis	
	2	Fike	Radiation Effects on Neurons & Stem Cells	
	3	Guida/Kim	Flow Cytometry & DNA Damage	
	4	Guida	H2AX Protocol	
	5	Guida	H2AX Presentation	
	6	Carlson/Rusek	Van de Graaff & EBIS Visit	
Friday, June 17, 2016	1	Kronenberg	Radiation Induced Instability	
	2	Slaba	Space Radiation Transport & GCR simulation	
	3	Slaba	HZETRN, OLTARIS & Monte Carlo codes	

NSRSS Presentations Report

Date	Sequence	Lecturer	Title
Friday, June 17, 2016	4	D. Goodhead	Track Structure 1
	5	D. Goodhead	Track Structure 2
	6	Kim	GERM Code
	7	Plante	Ritracks
Monday, June 20, 2016	1	Nelson	Tool Kit Practical
	2	Azzam	Non-targeted Effects
	3	Nelson	Beam Time Proposals
	4	Castle	Transgenic Models and New Imaging approaches
	5	Castle	Cancer Stem Cells
	6	Nelson	Beam Time Proposals
Tuesday, June 21, 2016	1	Zeitlin	Space Radiation Environment
	2	Zeitlin	Accelerator Physics and Space Radiation
	3	Nelson	Haematopoietic & Immune Response
	4	Randers-Pehrson	Microbeams
	5	Nelson	Microgravity Effects
	6	Nelson	Space Flight Measurements
Wednesday, June 22, 2016	1	Shay	3D Cell Culture Models
	2	Shay	Biol Countermeasures For Radiation Protection
	3	Baulch	Epigenetics
	4	Williams	Acute Effects
	5	Nelson	Review Time
Thursday, June 23, 2016	1	Boothman (Not in Drop Box)	Radiation-Induced DNA Damage & Repair Triggers Cell Signaling
	2	O'Banion	CNS Effects

NSRSS Presentations Report

Date	Sequence	Lecturer	Title
Thursday, June 23, 2016	3	O'Banion	Cardiovascular Effects
	3	Norbury/Nelson	Review Beam Time Proposals
	4	Blakely	Cataracts
	5	Blakely	Heavy Particle Therapy
Friday, June 24, 2016	1	Norbury/Nelson	Review Beam Time Proposals
	2	Norbury/Nelson	Student Team Presentations
Friday, June 02, 2017	1	Norbury	Elementary Radiation Physics
Monday, June 05, 2017	1	Simonsen	NASA's Mission and Roadmap
	2	Borak	What is Radiation
	3	Borak	Radiation Interactions with Matter
	4	Borak	Intro to Radiation Dosimetry
	5	Hall	Radiobiology 1
	6	Norbury	Intro to Space Radiation
Tuesday, June 06, 2017	1	Borak	Principles of Radiation Protection
	2	Nelson	Physics Tool Kit
	3	Borak/Heilbronn	Radiation detection methods
	4	Hall	Radiobiology 2
	5	Lowenstein	Accelerators
	6	Borak/Heilbronn	Physics Chalk Talk/problems
Wednesday, June 07, 2017	1	Heilbronn	Heavy Ions and Shielding Physics, including Neutrons
	2	Heilbronn	Physics Homework/ problems
	3	Held	Radiation Chemistry & DNA Damage
	4	Held	Dose responses, LET & RBE

NSRSS Presentations Report

Date	Sequence	Lecturer	Title
Wednesday, June 07, 2017	5	Kronenberg	Programmed Cell Death
Thursday, June 08, 2017	1	Wiese	DNA Repair 1
	2	Wiese	DNA Repair 2
	3	Bailey	Radiation Cytogenetics
	4	Kronenberg	Mutagenesis
	5	Carlson/Rusek	Van de Graaff & EBIS Visit
	6	Guida	Experimental Plan for Tomorrow (w/Rusek)
	7	Rusek/Guida	Experimental Plan for Tomorrow
Friday, June 09, 2017	1	Rusek	1/2 day Beam Time & 1/2 day at 490
Monday, June 12, 2017	1	Buonanno	Biology Experiment Overview for Tomorrow (w/Guida)
	2	Guida	Biology Experiment Overview for Tomorrow (w/Buonanno)
	3	Sivertz	Low-LET Reference Radiation
	4	Kronenberg	Programmed Cell Death
	5	Weil	Animal Studies
	6	Weil	Genetics of Animal Studies
	7	Weil	Leukemia
Tuesday, June 13, 2017	1	Buonanno	Beam Time (NSRL) and Lab (w/Guida)
	2	Guida	Beam Time (NSRL) and Lab (w/Buonanno)
Wednesday, June 14, 2017	1	Joiner	Radiosensitivity and Cell Cycle
	2	Joiner	Effects on Embryo, Fetus, Transgenerational
	3	Joiner	Dose Rate Effects
	4	Zeitlin	Space Radiation Environment
	5	Zeitlin	Accelerator Physics and Space Simulation

NSRSS Presentations Report

Date	Sequence	Lecturer	Title
Thursday, June 15, 2017	1	Limoli	Radiation Effects on CNS – acute – incl. Neurogenesis 1 (see Lemere)
	2	Lemere	Radiation Effects on CNS - delayed 2 (see Limoli)
	3	Britten	Behavioral Effects
	4	Rosi	Behavioral effects
	5	Buonanno	2 Labs: Flow Cytometry, DNA Damage
Friday, June 16, 2017	1	Goodhead	Low-LET Reference Radiation II
	2	Slaba	Space Radiation Transport & GCR simulation
	3	Slaba	HZETRN, OLTARIS & Monte Carlo codes
	4	Goodhead	Track Structure 1
	5	Goodhead	Track Structure 2
Monday, June 19, 2017	1	Nelson	Tool Kit Practical
	2	Boerma	Cardiovascular Effects
	3	Azzam	Non-targeted Effects
	4	Grabham	3D Cell Culture
	5	Turker	Epigenetics
	6	Brenner	Modeling Radiation Risks
Tuesday, June 20, 2017	1	Semones	Operations, Risk, Monitoring Crew Exposure, ISS Dosimetry
	2	Semones	ISS Dosimetry
	3	Williams	Hematopoietic and Immune Responses
	4	Harken	Microbeams
	5	Nelson	Microgravity Effects
	6	Nelson	Space Flight Measurements
Wednesday, June 21, 2017	1	Castle	Transgenic Models and New Imaging approaches

NSRSS Presentations Report

Date	Sequence	Lecturer	Title
Wednesday, June 21, 2017	2	Castle	Cancer Stem Cells
	3	Williams	Acute Effects of Exposure
	4	Woloschak	Radiation-induced Cell Signaling
	5	Williams	Biological Countermeasures
	6	Nelson	Beam Time Proposals
	Thursday, June 22, 2017	1	Nelson
2		Hei	Radiation and Tissue Signaling
3		Blakely	Cataracts
4		Blakely	Heavy Particle Therapy 1
5		Blakely	Heavy Particle Therapy 2 (see Story)
6		Story	Heavy Particle Therapy 2 (see Blakely)
Friday, June 23, 2017	1	Nelson	Review of Beam Time Proposals
	2	Nelson	Student Team Presentations (20 min each) w/Other Faculty